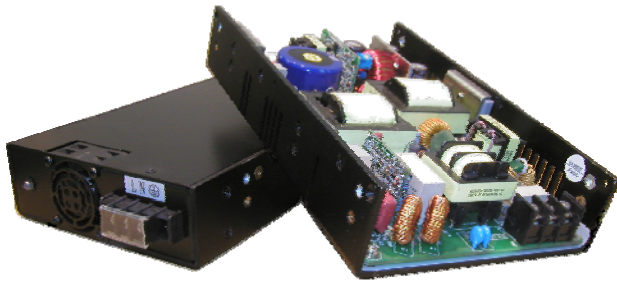




PDS Design Solutions Limited
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400W AC-DC PFC MEDICAL & ITE DEGREE POWER SUPPLY PDS1RL0402 SINGLE OUTPUT SERIES

FEATURES:



- ◆ Both Medical & ITE Safety Approvals
- ◆ Optional N+1 Forced Active Current Sharing
- ◆ Power Factor Corrected to EN61000-3-2 class D
- ◆ Providing Peak Power 700W within 500uS duty duration
- ◆ U-Chassis & Enclosed with built-in fan Mechanical Options
- ◆ 1U height size and High power density: 6.25 watts/cu inches
- ◆ Current Monitoring and Remote Voltage adjustment (Margin)

RL0402U Series (U-Chassis Type): 8(L) x 5(W) x 1.6(H) inches.
RL0402E Series (Enclosed Type): 9(L) x 5(W) x 1.6(H) inches.



PRODUCT SPECIFICATIONS:

Input Voltage: 90-264Vac full range, 47~63Hz.

Input Current: 6.35A at 90VAC full load.

Inrush Current: 35A Max @ 230VAC with full load and cold start.

PFC: Active power factor correction meet EN61000-3-2 class D.

Fan Drive: 12VDC/400mA is available to drive an external fan.

Transient Response: Returns to within 1% in less than 2.5mS for a 50% load change and the peak transient does not exceed 5%.

Overshoot: Turn-on/off not exceed 5% over nominal voltage.

Efficiency: 70% for 3.3V, 75% for 5V, 80% for 12V and 83% minimum for others output @ 230V and full load.

Turn On Delay: 1 second maximum at 120 VAC.

Hold Up Time: 20mS min. at 80% of full load.

Adjustability: Output user adjustable +/-5% minimum.

Remote Sense: Designated **RS+** and **RS-** on the CN3.

(Not available for current sharing models)

Remote On-Off: Designated as **RSW** on the CN3, requires a low signal to inhibit output.

Power Supply On: Green LED designated as **LED 1** on the PCB.

LED display: Bi-color green **LED** in front panel (RL0402E only);

Any protection occurred or RSW applied low signal will emit orange.

Power Good: Designated as **PG** on the CN3 will go high 100-500mS after regulation and goes low 1mS before loss of regulation.

Current Sharing: Designated as **CSH** on the CN3, optional single wired for forced current sharing function and parallel up to 4 units within 10% accuracy at full load.

Current Monitor: Designated as **CMN** on the CN3 for current sense for a 0.5V to 3VDC to represent 0% to 100% output current.

Margin: Designated as **MAG** on the CN3 providing 50% of output voltage remote adjustment by applying 0.4 ~ 5V signal on **MAG**.

AC Fail (optional): Designated as **ACF** on the CN3 to monitor the input voltage, when input goes under 80 +/- 5VAC the signal will go low (0V) and then go high (+5V) once reappears over 86VAC.

Input Circuit Protection (primary): Two T8A/250V fuses inserted.

Over-Power Protection: C.C. mode 110-140% and auto-recovery.

Input Voltage Protection: Power shut down under 80 +/-5Vac, and recovered over 86Vac.

Over-Voltage Protection: Latching down will occur when output voltage exceed 130% and recycle AC input to reset.

Short Circuit Protection: Trip without damage and auto-recovery.

Over Temperature Protection: Protected in the event of excessive operating ambient 85 degree, and automatic recovery.

Switching Frequency: 30KHZ fixed frequency.

Operating Temperature: 0 to 70°C ambient, de-rating at 2.5% per degree from 50°C to 70°C.

Storage Temperature: -20 to 85 degrees C.

Operating Humidity: 5% to 90% RH, Non-condensing.

Storage Humidity: 5% to 95% RH, Non-condensing.

Vibration: Frequency 5 to 50 Hz, acceleration +/-7.35 M/(SxS) on X,Y and Z Axis.

Emissions: FCC Part 15, CISPR 22 class B, Conducted.

Safety Regulation: Approved to UL60950-1/ 60601-1, CSA C22.2 No. 60950-1-03/ 601.1-M90, TUV EN60950-1/ 60601-1, CE Mark (LVD) EN61204-3/ 60601-1-2/ 61000-3-2,3 & IEC61000-4 Series Regulations and CB.

Leakage Current: Medical degree 300uA; ITE degree 1.5mA;

HI-POT Test: 1500 Vac between input line and chassis (2mA DC cut off current); 4000Vac between primary and secondary windings; Primary to core 1500VAC. All for 3 sec.

Grounding Test: Apply 40 A from ground pin to the earthed connection point. Maximum allowable resistance is 0.1ohm.

Warranty: 2 years.

MTBF: 100000 Hrs (according to MIL-HBK-217F) at 30°C.

Cooling: :PDS1RL0402U Series: U-Chassis @400W max. with 23CFM airflow or 250W max. under convection cooling.

RL0402E Series: Enclosed with side built-in fan @400W max.

Burn in: 45 +/- 5 degree C for 1 hour @230Vac with full load.

Enclosure: RL0402U Series: 8(L) x 5(W) x 1.6(H) inches.

PDS1RL0402E Series: 9(L) x 5(W) x 1.6(H) inches.

Weight: PDS1RL0402U Series: 1.3KG; PDS1RL0402E Series: 1.6KG.

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